

In the claims:

Cancel Claims 11-15 and 18-20 without prejudice, amend Claims 1-9 and 16 as follows and add Claims 21-27:

1. (Currently amended) A welding method for gas metal arc welding with continuous ~~electrode~~ electrode feeding, comprising the steps of  
conducting process control for short arc and/or spray arc welding, and also  
for conducting short pulsing for separating off essentially one droplet per pulse,  
wherein

alternating cyclically between the process control according to the short  
pulse method is caused to alternate cyclically between this pulsing and the  
process control for short arc or spray arc welding without intentionally  
extinguishing the arc being intentionally extinguished in between the pulsing and  
short arc or spray arc welding, and

pre-programming duration or the time for at least one of these process  
control methods is determined by a time programmed in by the pulsing and short  
arc or spray arc welding prior to beginning the method user.

2. (Currently amended) The welding method as claimed in claim 1, wherein  
comprising determining the duration or time for the pulsing ~~second process~~  
~~control method is determined by a frequency for the cyclic alternating between the~~  
pre-programmed pulsing and short arc or spray arc welding ~~process control~~  
~~methods programmed in by the user.~~

3. (Currently amended) A welding power source for MIG/MAG welding  
comprising  
a first process regulator for initiating and controlling short arc and/or spray  
arc welding,  
a second process regulator for initiating and controlling short pulsing for  
separating off essentially one droplet per pulse, and

it means for alternating cyclically between carrying out the short arc or spray arc welding and pulsing, and

means for pre-programming duration or time of said pulsing and short arc or spray arc welding prior to commencement of welding ~~method as claimed in claim 4.~~

4. (Currently amended) The welding power source as claimed in claim 3, wherein the pre-programming means comprises a timer settable ~~that can be set~~ for durations or times of 25 to 1000 ms.

5. (Currently amended) The welding power source as claimed in claim 4, wherein the pre-programming means comprises a timer settable ~~that can be set~~ for durations or times of 50 to 300 ms.

6. (Currently amended) The welding power source as claimed in claim 3, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing.

7. (Currently amended) The welding power source as claimed in claim 6, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

8. (Currently amended) A control box connectable ~~that can be connected~~ to a welding set as claimed in claim 3, additionally comprising a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing.

9. (Currently amended) The control box as claimed in claim 8, comprising a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

10. (Previously Presented) Software for carrying out the method as claimed in claim 1 in a welding set.

Claims 11-15. Canceled

16. (Currently Amended) A control box connectable ~~that can be connected~~ to a welding set including a welding power source for MIG/MAG welding comprising a first process regulator for initiating and controlling short arc and/or spray arc welding,

a second process regulator for initiating and controlling short pulsing for separating off essentially one droplet per pulse,

means for alternating cyclically between the short arc or spray arc welding and pulsing, and

means for pre-programming duration or time of said pulsing and short arc or spray arc welding prior to commencement of welding,

the pre-programming means also comprises a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing ~~as claimed in claim 11,~~ additionally comprising

a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing.

17. (Previously Presented) The control box as claimed in claim 16, comprising a setting device with special support for facilitating programming of the alternating between the first and second phases.

Claims 18-20. Canceled

21. (New) The welding power source as claimed in claim 3, wherein said means for cyclically alternating between said pulsing and short arc or spray arc welding includes means for determining the duration or time for the pulsing based upon frequency for cyclic alternating between the pre-programmed pulsing and short arc or spray arc welding.

22. (New) The welding method as claimed in claim 1, additionally comprising preventing occurrence of a short circuit during both said short arc and/or spray arc welding and short pulsing,

23. (New) The welding method as claimed in claim 1, wherein said short pulsing is conducted by periodically increasing welding current to a pulse current of size and length so that current density in a welding electrode creates sufficient electromagnetic force to separate off one droplet per pulse.

24. (New) The welding method as claimed in claim 23, wherein the welding current forms a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.

25. (New) The welding power source as claimed in claim 3, wherein said first and second process regulators prevent occurrence of a short circuit during both said short arc and/or spray arc welding and short pulsing.

26. (New) The welding power source as claimed in claim 3, wherein said second process regulator controls said short pulsing by periodically increasing welding current to a pulse current of size and length such that current density in a welding electrode creates sufficient electromagnetic force to separate off one droplet per pulse.

27. (New) The welding power source as claimed in claim 26, wherein said second process regulator controls the welding current to form a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.